

Social Services and the Market*

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Organizations that provide subsidized services to needy people are frequently discouraged from competing with one another. Many policymakers view the duplication of the competitive market place as wasteful, and stress coordination, not competition.¹ They claim that quality can be controlled by direct regulation and by the participation of needy clients in suppliers' decisions. Many of these attempts to improve quality have, however, been failures. Direct regulation has proven expensive and has often been ineffective.² Attempts to raise the quality of services through client participation on boards of directors and advisory groups have often floundered on the indifference and inaction of client representatives.³

In response to these difficulties some commentators have looked to economic analysis for help in obtaining high-quality social services. Isolating providers from the market, these commentators claim, will not eliminate unnecessary duplication, but will instead lead to low quality, wasteful operations.⁴ Various plans have therefore been offered for exposing social service providers to market pressures.

Under the most familiar proposal, needy clients are given vouchers that can be used to purchase the services of any qualified supplier. Vouchers, however, will assure efficiently provided, high-quality services only if beneficiaries or their guardians are able to make informed decisions about quality.

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1. See, e.g., National Academy of Public Administration, *Reorganization in Florida: How is Service Integration Working?* (1977) (analysis of recent reorganization of social services in Florida); M. Aiken, R. Dewar, N. DiTomaso, J. Hage & G. Zeitz, *Coordinating Human Services* (1975) (five case studies of attempts to coordinate services for the mentally retarded); see also Weiss, *Substance vs. Symbol in Administrative Reform: The Case of Human Services Coordination*, 7 *Pol'y Analysis* 21 (1981) (critique of attempts to avoid duplication in social service).

2. For example, monitoring of day care by public funding sources appears to be inadequate. See Jackson, *The Present System of Publicly Supported Daycare*, in *Public Policy for Day Care of Young Children* 21, 35-40 (1973). Furthermore, in most communities the United Way, a private funding source, does not effectively evaluate service quality. Rose-Ackerman, *United Charities: An Economic Analysis*, 28 *Pub. Pol'y* 323 (1980).

3. For example, one experiment with education vouchers, discussed *infra* note 24, placed parents on a school-district-wide advisory committee. Parents "tended to be absent, poorly informed, and deferential to the professionals" on the committee. Cohen & Farrar, *Power to the Parents? The Story of Education Vouchers*, 48 *Pub. Interest* 72, 88 (1977). But see Dimieri & Weiner, *The Public Interest and Governing Boards of Nonprofit Health Care Institutions*, 34 *Vand. L. Rev.* 1029 (1981) (recommending more client involvement on governing boards).

4. See, e.g., Nelson & Krashinsky, *Two Major Issues of Public Policy: Public Subsidy and Organization of Supply*, in *Public Policy for Day Care of Young Children* 47 (1973).

Yet even when vouchers are not feasible, alternative techniques may preserve some of the benefits of market discipline. This Article considers one such method, called "proxy shopping," which makes use of the market choices of unsubsidized clients to assure high quality for the needy. Under the system, funding agencies reimburse suppliers directly for services delivered to the needy. The rate of reimbursement is equal to the amount paid by unsubsidized customers for the same services. This method is particularly well suited to situations in which vouchers are ineffective because program beneficiaries are poorly informed or immobile, or because the choices of their legal guardians are thought to be unreliable.

Although Clark Havighurst outlined a proxy shopping proposal thirteen years ago,⁵ it has had little impact on the policy debate. This is perhaps because Havighurst did not develop the idea carefully and because he applied it to a service, medical care, where it can be of only limited usefulness. In this Article, I present a model of a social services market that can be used both to identify more precisely the strengths and weaknesses of proxy shopping and to examine the desirability of using proxy shopping to finance several particular social services. I hope to demonstrate that proxy shopping should be given serious consideration as a quality-control device by government agencies and by private charitable organizations that provide subsidy funds to a range of nonprofit, for-profit and government suppliers of social services.

Part I of this Article analyzes the limitations of voucher plans. Part II presents a model in which vouchers are ineffective while a proxy shopping plan can serve quality-control goals. Part III compares the effectiveness of vouchers and proxy shopping in controlling costs. Part IV discusses the strengths and weaknesses of using paying customers to monitor quality in three contexts: care of the "deinstitutionalized" mentally retarded, health maintenance organizations and nursing homes, and integrated schooling. The Article concludes that proxy shopping can be helpful in monitoring community-based care for the retarded and can provide limited but valuable assistance in health care. In education, however, where integration by race and class is an important goal, the mobility of the wealthy can make it harder, rather than easier, for the poor to obtain high quality services.

I. PROVIDING HIGH QUALITY SOCIAL SERVICES: THE LIMITS OF VOUCHERS

Voucher plans are the most widely discussed method for introducing market pressures into the provision of social services. The beneficiaries of a voucher plan are given "tickets," which can only be used to purchase speci-

5. Havighurst, *Health Maintenance Organizations and the Market for Health Services*, 35 *Law & Contemp. Probs.* 716 (1970). A similar reimbursement system was also proposed in R. Andreano & J. Nyman, *A Modest Proposal for Paying Nursing Homes under the Medicaid Program* (1982) (University of Wisconsin-Madison Health Economics Research Center Research Reports Series), and further developed in J. Nyman, *Nursing Home Reimbursement for Medicaid Patients: The Case for a Market Based System* (1982) (unpublished manuscript).

fied goods or services, such as food, housing, or education, but which can be used at any qualified supplier chosen by the beneficiaries. Suppliers then redeem the vouchers for cash from the funding agency.

Under a voucher plan, at least in principle, suppliers face the same market pressures in serving subsidized customers as they do in serving unsubsidized ones. A subsidized customer who is dissatisfied with the price-quality combinations offered by a supplier is free to search for another who can provide higher quality goods or lower prices. This creates competition among suppliers and should result in a market where the various quality levels that customers demand are sold for the lowest price that will cover suppliers' marginal costs.

The assumptions that underlie a pure voucher program—that is, one with no supplementary regulation—are based on a curious mixture of free choice and paternalism. On the one hand, vouchers can only be spent on particular goods or services that reflect the wishes of those who fund the program.⁶ Thus, the funding agency does not leave beneficiaries entirely free to make choices according to their own preferences. On the other hand, since beneficiaries are allowed to choose their own suppliers, the funding agency must assume that beneficiaries are capable of making rational tradeoffs between quality and quantity, that they are effective judges of quality, and that they have access to adequate sources of supply. Absent the subsidy, they would consume less of the service, but this consumption pattern would not arise from a lack of information or of viable alternatives but from a simple lack of resources.

Vouchers are currently used in programs that subsidize food,⁷ housing⁸ and medical care,⁹ and many commentators have advocated extending the use of vouchers to other social services such as education.¹⁰ Most of the current and proposed programs, however, impose supplementary quality-control regulations, thus diluting the effect of market decisions by the beneficiary on the quality of the service. Of the few pure voucher programs that do exist, only one, food stamps,¹¹ exclusively aids the needy. The Department of Agriculture, which administers the food stamp program, does not impose special

6. In general, a funding agency might have any one of three attitudes towards the beneficiaries of the services it provides. (a) The beneficiaries' utility levels enter the donors' utility functions directly. The funding agency does not care what beneficiaries do with their subsidy payments as long as they feel better off. (b) The funding agency is indifferent to beneficiaries' own expressions of preference. Instead, the agency benefits from knowing that beneficiaries are consuming particular goods and services. See D. Collard, *Altruism and Economy: A Study in Non-Selfish Economics* 7-8 (1978) (distinguishing between "utility-related" and "commodity-related" interdependence). (c) The final situation is a mixed case in which both the beneficiaries' consumption of particular services and their evaluation of this service enter the funding agency's utility function. Advocates of voucher plans have either type (b) or type (c) preferences.

7. See *infra* notes 11-13 and accompanying text.

8. See *infra* notes 16-21 and accompanying text.

9. See *infra* notes 22-23 and accompanying text.

10. See *infra* note 24 and accompanying text.

11. Food Stamp Act of 1977, 7 U.S.C. §§ 2011-2029 (Supp. V 1981).

quality-control regulations on suppliers that accept food stamps¹² and does not try to control the diets of beneficiaries.¹³ Unlike the food stamp program, the other pure voucher programs are not designed exclusively to aid the poor. They are administered through the federal income tax system, and thus provide no benefits to people too poor to pay taxes. Indeed, these programs generally are not even characterized as voucher plans. Nevertheless, deductions and tax credits for such services as child care, medical treatment, legal fees and housing are essentially voucher plans which lower the costs of certain services and impose few restrictions on consumers' choices of suppliers.¹⁴

12. Since 1977, the food stamp program has given eligible households fixed-sum vouchers that must be spent on food. Food and Nutrition Service, U.S. Dep't of Agriculture, Food Stamp SSI/Elderly Cashout Demonstration Evaluation 70-72 (1982). Certain kinds of food—e.g., liquor, and most hot foods—cannot be purchased with food stamps, 7 U.S.C. § 2012 (g) (1982), but otherwise beneficiaries can purchase anything they want, and neither stores nor the needy are required to report on the foods purchased with food stamps. For descriptions of the food stamp program, see K. Clarkson, Food Stamps and Nutrition (1975); M. MacDonald, Food, Stamps, and Income Maintenance (1977). Real outlays on the food stamp program have fallen during the Reagan administration, but the basic nature of the program has remained unchanged. Aaron, Nondefense Programs, in *Setting National Priorities: The 1983 Budget* 101, 108-09 (J. Pechman ed. 1982).

13. Nevertheless the quality of food consumed appears to be adequate. A study of food buying habits concluded that both recipients of food stamps and eligible low-income people not in the program used food "sufficient, on the average, to provide the 1974 Recommended Dietary Allowances (RDA) for food energy and 11 nutrients studied. Averages for participants were higher in most nutrients than for nonparticipants." Science and Educ. Admin., U.S. Dep't of Agriculture, Food Consumption and Dietary Levels of Low-Income Households, Nov. 1977-Mar. 1978, at 2, 24, 32 (1981) [hereinafter cited as Science and Educ. Admin.]. In terms of nutrients per dollar, participants were just about as efficient purchasers as low-income non-participants. *Id.* at 21. However, on the average low-income individuals consume more nutrients per dollar of food purchased than those with higher incomes. Science and Educ. Admin., U.S. Dep't of Agriculture, Money Value of Food Used by Households in the United States, Spring 1977, at 12 (1979).

14. These tax-expenditure programs fall into two classes. First, some programs directly lower individual tax bills. See, e.g., I.R.C. § 44A (Supp. V 1981) (tax credits for child care); I.R.C. § 44C (Supp. V 1981) (tax credits for energy conservation investments); I.R.C. § 163 (1976) (deductibility of mortgage interest payments); I.R.C. § 170, 642(c) (1976 & Supp. V 1981) (deductibility of charitable contributions); I.R.C. § 213 (1976) (deductibility of medical expenses); see also Staff of Senate Comm. on the Budget, 97th Cong., 2d Sess., Tax Expenditures 55-62, 135-42, 217-24, 237-38 (Comm. Print 1982) (describing the programs and estimating lost taxes) [hereinafter cited as Tax Expenditures]; *id.* at 305-08 app. A (giving distribution of these and other tax expenditure programs by income class).

Although the Tax Code only permits the deduction of gifts to certain types of charitable organizations, I.R.C. § 170(c) (1976), and the I.R.S. may audit taxpayers with large deductions, Internal Revenue Service, U.S. Dep't of Treasury, Internal Revenue Manual § 4015.7; Premis, The Audit Review Process, 11 Creighton L. Rev. 755 (1978), these restrictions are primarily intended to prevent and uncover fraud and are not aimed at ensuring service quality. Treas. Reg. §§ 1.44A, 1.163, 1.170, 1.642(c), 1.213 (1979). One restriction on deductibility may be motivated in part by a desire to regulate service quality: most child care outside the home must be provided in day care centers licensed by the state. I.R.C. § 44A(c)(2)(C) (Supp. V 1981). It remains to be seen, however, whether the IRS will vigorously enforce the provision in light of its primary concern with tax evasion.

A second kind of tax expenditure benefit is illustrated by laws which permit employees to exclude from their income the value of certain services, e.g., life insurance, I.R.C. § 79 (1976), medical, I.R.C. § 106 (1976), and legal services, I.R.C. §§ 120, 501(c)(20) (1976 & Supp. V 1981), education, I.R.C. § 127 (Supp. V 1981), and child care, provided by their employer, I.R.C. § 129 (Supp. V 1981). The day care provisions specifically permit employers either to provide the

Except for "tax expenditures" and food stamps, other voucher programs and proposals do not rely solely on market incentives to regulate quality. Instead, they impose direct regulations that reflect policymakers' concerns about both suppliers' monopoly power and beneficiaries' limited information and scarce "shopping time".¹⁵ Proposed housing voucher plans, for example, generally include a requirement that housing meet specified quality standards,¹⁶ and the Department of Housing and Urban Development (HUD) imposed quality requirements in its housing voucher experiments.¹⁷ Under section 8 of the Housing Act, the HUD program that most closely approximates a voucher scheme,¹⁸ even greater constraints are placed on beneficiaries. To qualify for a section 8 subsidy, housing units must not only meet quality standards imposed by HUD and local public housing authorities,¹⁹ but they must be leased at a rent below a specified maximum level.²⁰ Thus, section 8

services "in-house" or to give their employees vouchers to purchase the service in the market, I.R.C. § 129 (Supp. V 1981). See also Zeitlin & Campbell, *Availability of Child Care for Low-Income Families: Strategies to Address the Impact of the Economic Reconciliation Act of 1981 and the Omnibus Budget Reconciliation Act of 1981*, 16 *Clearinghouse Rev.* 285, note 97 (1982). As in the case of deductions, IRS scrutinizes exclusions for fraud, not quality, and a check of recent IRS Revenue Rulings showed no disputes under these sections. Treas. Reg. § 1.79, proposed § 1.120, proposed § 1.127, § 1.129.

15. See, e.g., Bridge, *Information Imperfections: The Achilles' Heel of Entitlement Plans*, 86 *Sch. Rev.* 504 (1978). The author argues that

[w]e must face the fact that various target groups differ in their information-seeking habits and information-processing abilities, and [that] . . . low-income, less educated individuals . . . are exactly the ones who are least likely to seek and process the information they need to make intelligent choices. Forty years of social research have consistently found a positive correlation between information levels and social class, and this is true for a wide range of subjects including child rearing practices, education, nutrition and general information.

Id. at 512 (citations omitted).

16. De Leeuw, Leaman & Blank, *The Design of a Housing Allowance* (Urban Institute 1970), reprinted in *Economic Foundations of Property Law* 218 (B. Ackerman ed. 1975), analyzes four kinds of voucher plans which differ in the amount of direct quality control.

17. The results of the experiments are summarized in Congressional Budget Office, U.S. Congress, *Federal Housing Assistance: Alternative Approaches* 43-50 (1982); Khadduri & Struyk, *Housing Vouchers for the Poor*, 1 *J. Pol'y Analysis & Mgmt.* 196 (1982); Struyk, Tuccillo & Zais, *Housing and Community Development*, in *The Reagan Experiment* 393, 408-10 (1982).

18. United States Housing Act of 1937, § 8, 42 U.S.C. § 1437f (1976). For an evaluation of § 8 as originally constituted, see Olsen & Rasmussen, *Section 8 Existing: A Program Evaluation*, 6 *Occasional Papers in Housing & Community Aff.* 1 (1979).

19. The Act requires substantial rehabilitation of existing housing. 42 U.S.C. § 1437f(a) (1976). HUD has set minimum housing quality standards and in 1980 they elaborated these general standards with a detailed training manual. 24 C.F.R. § 882.109 (1982) U.S. Dep't Housing and Urban Development, *Inspection Form: Section 8 Existing Housing Program* (1980) (OMB No. 063-R1684). Local Public Housing authorities can, with HUD approval, add more stringent requirements, and about one-third have done so. These additional quality standards often reflect local housing codes which are, in principle, applicable to all housing. Interview with Jennifer Stucker, Social Science Analyst, Policy Development and Research, HUD. In fact, the § 8 requirements are more stringent than those applied to the market as a whole because a unit cannot be included in the program unless it has passed an inspection. In the private market, in contrast, housing can be rented without a prior inspection by housing code authorities, and many communities do not even have a code for existing housing.

20. § 8(c)(1), 42 U.S.C. § 1437f(c)(1) (1976).

not only regulates housing quality, but also limits the right of beneficiaries to decide how much of their income will be allocated to housing. The Reagan Administration has proposed making section 8 more like a pure housing voucher program by removing the rent ceilings, but the basic minimum quality standards would remain unchanged.²¹ Thus even as it moves to a greater reliance on market tests, the Administration has retained direct controls and appears unwilling to rely on the choices of beneficiaries.

Medicare and Medicaid are both similar to open-ended voucher programs since beneficiaries are generally able to choose which doctors and hospitals to use and since few overall limits are placed on spending.²² Nevertheless, the government sets the basic terms of the subsidized insurance contract and regulates rates.²³

Similarly, most advocates of vouchers in education do not favor a program which gives parents complete freedom of choice. Systems typically limit segregation by race and class, control some curricular and personnel deci-

21. The proposed revisions would also increase the incentive to shop for housing that qualifies for the subsidy. At the same time, however, benefit levels would be cut substantially so that the overall incentive to participate would be much lower than at present. See Aaron, *supra* note 12, at 121-24; Struyck, Tuecillo & Zais, *supra* note 17, at 408-10.

22. The relevant statute is the Social Security Amendments of 1965, 42 U.S.C. §§ 1395, 1396 (1976). For additional information on Medicaid, see Feder, Holahan, Bovbjerg & Hadley, *Health in The Reagan Experiment* 271 (1982) (overview of Medicare and Medicaid) [hereinafter cited as *Health*]; Congressional Budget Office, *Medicaid: Choices for 1982 and Beyond* (1981).

23. Prices are regulated by the government, and not all services are covered. Doctors and hospitals can refuse to take Medicaid and Medicare patients if they believe the reimbursement rates are too low. *Health*, *supra* note 22, at 300, claims that "Medicare and Medicaid . . . pay providers lower rates than the private sector does." According to the Congressional Budget Office, *supra* note 22, "[t]he difference between Medicaid fees and Medicare fees for physicians' services is substantial, and the difference between Medicaid fees and those charged private patients is even greater." Under Medicare, "[p]hysicians are paid the lowest of their actual charge, their average charge, or the 75th percentile of charges for the same procedure." *Id.* at 18-19.

Recently the Reagan Administration and Congress have proposed a number of changes, some of them designed to give beneficiaries an incentive to be more sensitive to costs. For Medicare, Congress enacted an amendment that increased the cost-sharing requirements, and the Reagan Administration has also proposed tightening the allowed charge for physicians' services. For Medicaid, the administration has recommended cost sharing for the elderly and the disabled poor, as well as a requirement that states impose general cost sharing. *Health*, *supra* note 22, at 286. Given budget pressures, states themselves are reducing the coverage of optional services, restricting eligibility, and limiting the charges they will reimburse. *Id.* at 282-91. However, these proposals may do little to enhance competition between suppliers or improve quality.

To increase competition, some experts have suggested "a shift from publicly run to publicly financed insurance. Program participants would receive fixed-value vouchers to purchase insurance in the private market. The initial value of these vouchers would be the cost of an average beneficiary's medical care under the public system." See *id.* at 299; see also Congressional Budget Office, U.S. Congress, *Containing Medical Care Costs Through Market Forces* 47-53 (1982). Other analysts, however, believe that there is a tradeoff between controlling costs through vouchers and assuring quality. An Urban Institute study argues that vouchers might produce reductions rather than increases in quality, *Health*, *supra* note 22, at 300. Aaron, *supra* note 13, at 130, worries that if beneficiaries are "required to choose among alternative health insurance plans, it would be necessary to decide what protection to give patients, particularly the elderly, who may be too uninformed or bewildered to make sound judgments."

sions, and limit parents' ability to supplement the voucher with their own funds.²⁴

The reluctance of policymakers to endorse a pure, unregulated voucher plan reflects a pervasive difficulty. The premise underlying a pure voucher plan is that informed market decisions by recipients of services will assure optimal quality. Yet in many contexts such informed choice is unlikely or impossible. This disadvantage is particularly acute when the beneficiaries are very young, very old, sick or handicapped.²⁵ The efficacy of vouchers designed to aid such needy people would depend entirely on the choices of those who care for them. If many beneficiaries have no guardians, vouchers can be of no use at all. Even if most dependent people do have parents or family members who can be charged with spending the voucher, the funding agency may believe that these people will not adequately represent the beneficiaries' interests. For example, a pure voucher plan cannot assure high quality nursing home care for senile old people if their relatives are not sufficiently concerned

24. Education vouchers were originally proposed by Milton Friedman in *Capitalism and Freedom* 85-98 (1962). Since then, much has been written on vouchers by both economists and educators. One analyst, after reviewing the history of education vouchers writes that "the actual implementation of education vouchers will inevitably involve additional regulatory activities . . . such as certifying schools and staff, overseeing the process of student selection by schools, and designating voucher amounts for students with special needs." Salganik, *The Fall and Rise of Education Vouchers*, 83 *Tchrs. C. Rec.* 263, 278 (1981). A plan recently proposed in California would forbid additional regulation of private schools but permit the legislature to allocate resources to encourage diversity and provide information, and it may require standardized testing and minimum competency graduation requirements. Coons & Sugarman, *Educational Tax Credits versus School Vouchers: Comment on the California Tuition Tax Credit Proposal*, in *Family Choice in Schooling* 169 (M. Manley-Casimir ed. 1982). For the text of the proposed amendment, see *id.* at 181. An experiment meant to test the efficacy of vouchers was carried out by the Rand Corporation in Alum Rock, California. This impoverished school district was induced to participate with promises of extra federal funds. Because it proved difficult to separate the effect of vouchers from the effect of extra funds, because no private schools participated, and because political pressures within the school district, especially from teachers, prevented the full force of market pressures from operating, the experiment yielded few useful results. The experiment is described in Rand Corp., *A Public School Voucher Demonstration: The First Year at Alum Rock* (1974). The results are critically examined in Cohen & Farrar, *supra* note 3. Bridge, *supra* note 15, shows that the poor information of parents limited the effectiveness of the program and reports that the poorly educated were less well-informed than other groups of parents.

In spite of considerable criticism of voucher plans, and one discouraging experiment, education vouchers are still a live issue. Two early supporters have proposed an amendment to the California Constitution establishing a voucher system, Coons & Sugarman, *supra*, and a Reagan-appointed panel on school financing endorsed vouchers in principle and recommended that federal aid to disadvantaged school children be given, not to school districts, but to the children themselves as vouchers or "tuition credits." These credits could be used in either public or private schools. U.S. Advisory Panel on Financing Elementary and Secondary Education, *Toward More Local Control: Financial Reform for Public Education 5-6* (1982). A minority of the panel objected to the voucher proposal because they believed that the parents of the intended beneficiaries would not make the best educational choices for their children and because the plan would undermine public schools. *Id.* at 13-15.

25. Nevertheless, voucher plans have been proposed for programs that aid dependent people, although most retain considerable direct regulation of quality and price. See, e.g., Nelson & Krashinsky, *supra* note 4 (day care); B. Baker, G. Seltzer & M. Seltzer, *As Close As Possible: Community Residences for Retarded Adults* (1974) (mental retardation); Pruger & Miller, *Competition and the Public Social Services*, *Pub. Welfare*, Fall 1973, at 16. See generally Reid, *Reforming the Social Services Monopoly*, *Soc. Work*, Nov. 1972, at 44.

about the welfare of their elderly family members to investigate thoroughly the quality of various nursing homes.

Supplementing a voucher plan with direct regulation of suppliers might remedy the unwillingness or inability of guardians to make informed choices, but the advantages of a voucher plan are obviously attenuated if vouchers must be accompanied by direct controls on quality. Direct regulation of quality is, moreover, often cumbersome and ineffective. It would be preferable to develop a plan that used market pressures for quality control but that did not have the disadvantages of vouchers. In the next Part, I will show that proxy shopping can be used under some conditions to assure high quality without the need for direct regulation of quality. This system would be especially useful in those situations in which vouchers are ineffective because beneficiaries, for one reason or another, are incapable of making choices among various suppliers.

II. USING PAYING CUSTOMERS TO MONITOR QUALITY THROUGH PROXY SHOPPING

In this Part, I present a stylized social service "market" in which proxy shopping is a more effective quality-control mechanism than either vouchers or direct regulation of quality. In this market, there are many suppliers of a similar service, but needy beneficiaries are each limited to a single supplier. Age, sickness, disability or poverty restricts their mobility.²⁶ The funding agency wishes to assure that the needy receive reasonably high-quality services under a plan which pays suppliers the market price. Vouchers, however, are useless as a quality-control method, since the needy are entirely immobile. Moreover, I assume that direct regulation is not feasible because the funding agency has difficulty both discovering suppliers' costs of production and monitoring service quality.²⁷ The same service is also demanded by unsubsidized customers, however, who are mobile, well informed, and not economically disadvantaged. Thus, in the model developed here, the choices of paying customers can be used to assure high quality for all through a proxy shopping scheme.

The basic proxy shopping plan is simple. In contrast to a voucher program, the funding agency reimburses the supplier directly for services ren-

26. In a few situations mobility is restricted by law. Thus, some public subsidies for day care require recipients to send their children to specified centers. Jackson, *supra* note 2, at 21. For a critique of this practice, see Nelson & Krashinsky, *supra* note 4 at 63-64.

27. Moreover, I assume that representatives of the funding source cannot monitor service quality directly by becoming paying customers. Thus, this model is not applicable to most artistic and cultural activities where donors are generally also paying customers. For an analysis of the pricing practices of cultural institutions, see Hansmann, *Non-Profit Enterprise in the Performing Arts*, 12 *Bell J. Econ.* 341 (1981).

The funding source, however, has no problem determining who is eligible for subsidy. See M. Krashinsky, *User Charges in the Social Services: An Economic Theory of Need and Ability*, (1981), for a discussion of the monitoring problems that arise when it is difficult to identify the needy. Krashinsky argues that in-kind transfer programs may be preferable to monetary transfers in this case even when donors only care about the utility levels of the needy.

dered to subsidized customers. In order to receive reimbursement a supplier must have a certain number of unsubsidized, paying customers. The funding agency pays any supplier who meets this requirement an amount equal to the price paid by unsubsidized customers multiplied by the number of subsidized customers served by the supplier.

Although the basic mechanism of a proxy shopping plan is simple, the desirability of such a plan depends on the presence of a detailed set of conditions. In this Part, I first present a model of a social services market in which these conditions are met so that a proxy shopping plan without any supplementary regulations ensures that subsidized customers receive the same level of quality as paying customers. I then go on to consider situations in which a pure proxy shopping plan encounters difficulties that can be corrected through modification in the scheme. Even when proxy shopping must be supplemented with various regulations, it often will still be more effective than a voucher system or a plan that controls quality entirely through direct regulation.

A. *The Basic Model*

1. *The Desirability of Using Paying Customers' Choices.* Before implementing a proxy shopping plan, a funding agency must determine that the needy should receive the same quality levels as the unsubsidized. The agency must therefore ask (1) whether paying customers themselves receive reasonably high quality levels, and (2) whether the needy and the unsubsidized have comparable tastes, so that the choices of paying customers are acceptable surrogates for the choices the needy would make if they were capable of shopping for themselves.

a. *Competitive Markets.* Deciding whether paying customers receive adequate levels of quality is a relatively complex task, which is explored in greater detail later.²⁸ At a minimum, however, to assure reasonably high quality, the market for the service must be relatively competitive. In other words, there must be many suppliers of the service, each of whom competes for the business of customers by trying to produce high quality for low prices. Therefore, the model assumes that scale economies are small relative to the size of the market so that paying customers have a real choice of providers. Although a wide range of circumstances can produce diseconomies of scale, the diseconomies in this market are assumed to result from the presence of congestion, a circumstance that is particularly characteristic of social services and of other goods that are consumed communally. Communal goods are those, such as day care centers and movies, that can be consumed by several people simultaneously, as opposed to private goods, such as ice cream, that can only be consumed by a single individual. Congestion occurs because, after serving a certain number of customers, a communally used facility becomes crowded,

28. See *infra* text accompanying notes 34-35.

and quality can be maintained only by incurring additional costs.²⁹ Therefore, it generally will be efficient for several suppliers to exist even if they all provide the same quality of service.

In addition, the market functions smoothly because I assume that the participants in it are rational maximizers. Paying customers seek to maximize their utility subject to their budget constraints, while suppliers choose the price-quality level that most benefits them: for-profit firms maximize profits; nonprofit firms—both charities and government instrumentalities—maximize revenues subject to a break-even constraint. Hence, producers have an incentive to provide the price-quality combinations demanded by paying consumers.

b. *The Quality Index.* By using a single index of quality for all customers, the model assumes that both needy and paying customers assign the same weights to various measures of service quality. To put it more formally, the services provided by any supplier can be completely characterized by specifying the level of the quality index, q_i .³⁰ Moreover, both needy and paying customers value increments in the quality index, and there is no point at which either group ceases to derive benefits from increases in quality.³¹

Normally, customers must choose not only the quality but also the quantity of a service. A more general model would therefore permit paying and subsidized customers to sacrifice quality for given increases in quantity. To keep the discussion simple, however, the model assumes that all customers consume the same quantity of the service, and that each person patronizes only one supplier.

2. *The Feasibility of Using Paying Customers' Choices.* If the funding agency concludes that the needy should obtain the same quality as that chosen by paying customers, it must then consider whether proxy shopping is an effective substitute for direct regulation of quality. The agency must therefore ask (1) whether it is reasonable to expect paying and subsidized customers to use the same suppliers, and (2) whether suppliers are likely to provide subsidized customers assigned to them with the same level of quality they provide to paying customers.

29. Congestion-prone goods are analyzed in Berglas & Pines, Clubs, Local Public Goods and Transportation Models, 15 J. Pub. Econ. 141 (1981).

30. Essentially q_i is a hedonic price index or weighted average of service characteristics. For an analysis and critique of the theory underlying the use of hedonic indexes, see Rosen, Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition, 82 J. Pol. Econ. 34 (1974).

31. This nonsatiation assumption should be contrasted with an alternative specification in which each person has a most preferred quality level. The suppliers' services would then be like the color spectrum. Each person has a most preferred "color" that they would choose if the price of colors were zero. The distinction between nonsatiation in quality and quality as "color" is equivalent to the distinction made in industrial-organization literature between "quality dispersion" and "product variety" respectively. See Stiglitz, Equilibrium in Product Markets with Imperfect Information, 69 Am. Econ. Rev. Papers and Proc. 339, 342-43 (1979). In the "product variety" case, the subsidized and the unsubsidized would have to have similar "favorite colors" in order for a proxy shopping scheme to succeed.

a. *Nonsegregation of Customers.* Three conditions must be met to ensure that there are no obstacles to the use of the same suppliers by both needy and paying customers. First, the model assumes that a substantial proportion of paying customers do not care who else consumes the service along with them and are therefore not reluctant to use suppliers that serve subsidized customers. Second, suppliers are also assumed to be indifferent to the mix of customers so long as the subsidy rate equals the market price. The needy are assumed to be no more or less expensive to care for, on the average, than are those who pay their own way. Third, the model assumes that the suppliers to which paying customers have access include providers who realistically could be used to provide services to the needy. This condition, which I call the *mixing-and-sorting* condition, itself has two preconditions. First, since people of similar incomes tend to live near each other, transportation and search costs must be low enough and homogeneous income clusters small enough to permit paying customers to shop outside their immediate neighborhood.³² Second, scale economies, although small enough to ensure a competitive market structure, must also be large enough to make it efficient for firms to provide services to a substantial number of customers. For example, suppose that babysitters provided the most economical form of full-time child care. Individual sitters would not generally be able to care for the children of more than one household, and proxy shopping could not be used.

b. *The Nondiscrimination Condition.* Proxy shopping will only succeed if the quality of service a person obtains from a particular supplier is independent of whether he or she is a paying customer. I refer to this as the *nondiscrimination* condition. This condition is met if suppliers have either one of two characteristics. First, the service may be organized so that everyone consumes the service in common. Suppliers can exclude unsubsidized customers who are unwilling to pay the entry fee, but once people are "inside the door"—whether through subsidies or their own resources—everyone is treated alike. Second, if the service is consumed individually rather than communally, it must be provided by staff members who do not distinguish between paying and subsidized customers. This could occur for any of three reasons: Admissions may be separated from service provision so that the staff is unable to identify paying customers; the staff may be trained in a profession that teaches that equal care should be given to all clients; or the staff may be reimbursed in a way that removes any incentive to discriminate between clients.

B. Proxy Shopping in a Simple Market

1. *Equilibrium with No Subsidized Customers.* My discussion of equilibrium proceeds in two stages. First, I specify equilibrium conditions in a simple market with no subsidized customers, and second, I introduce a subsidy

32. See Pack & Pack, *Metropolitan Fragmentation and Suburban Homogeneity*, 14 Urb. Stud. 191 (1977) (documenting both the coexistence of average income difference across communities and wide variation in incomes within communities).

program. Suppose that all paying customers have equal incomes and tastes and that all firms have identical production functions. In equilibrium all paying customers must be equally well off. If one supplier provides higher quality services than another, this is exactly balanced by a higher price. Thus, all consumers are indifferent between suppliers. Since the market is competitive, all producers set price equal to marginal cost. Any producer who tries to charge a higher price loses all its customers. Let us assume further that the firms' cost functions have a special form: the cost of producing increments in quality is such that given identical consumers there is only one equilibrium price-quality combination which maximizes profits or revenues. Many simple production functions have this property, and the Appendix develops one example where all firms just cover their costs in equilibrium.

2. *Equilibrium with Proxy Shopping.* Now suppose that each supplier i serves w_i needy clients. Suppose, moreover, that each supplier has a single source of subsidy payments—e.g., the United Fund, a government agency, or a single wealthy donor—that has the power to withhold funds from managers. An effective subsidy strategy for the funding agency has two parts: the conditions under which the agency provides funds, and the subsidy level it provides to eligible firms. A proxy shopping plan would require each provider i to serve at least one paying customer. If this condition is met, the funding agency would then provide a subsidy of p_i , times the number of needy clients cared for by firm i , w_i . Since only one p_i , q_i combination maximizes the utility of paying customers, the firm must choose this point if it is to serve any paying customers. Therefore, the funding agency has succeeded in assuring that both the subsidized and unsubsidized receive the same quality level.³³ Proxy shopping is a fully effective quality-control device under these conditions, and no direct regulation is necessary.

The payment, $p_i w_i$, is the only subsidy level which efficiently fulfills the funding agency's quality-control goal. A lower rate would not permit suppliers to break-even in competition with suppliers who serve fewer subsidized customers. A higher rate also has little to recommend it as a subsidy strategy. A higher subsidy rate would permit the firms to raise quality levels, lower prices, and attract more paying customers. If the subsidy were proportional to the number of needy clients, then providers with larger numbers of subsidized customers would attract a larger number of paying customers. A funding agency that wished to support the needy would pay the congestion costs of increased numbers of customers, and paying customers would end up obtaining part of the benefit of the subsidy. Instead of using paying customers to assure high-quality care for the needy, the proxy shopping plan would subsidize high-quality care for the wealthy. (A mathematical model, found in the Appendix, develops these points more fully.)

33. Obviously, this payment scheme is only feasible if donated funds or tax revenues at least equal the required subsidy payment. Thus, a more complete model would analyze tax or donation decisions and consider their interaction with quality-control strategies.

A proxy shopping plan in this simple market raises only one question of fairness, and it can be dismissed quickly. Whatever quality level beneficiaries receive, they may still complain that they "need" higher levels of quality. Since needy beneficiaries, like paying customers, have utility functions without satiation in quality, they will want as high a quality level as possible when its price is zero. The failure to satisfy these demands, however, can hardly be seen as a weakness of proxy shopping. The needy receive the same level of quality as the unsubsidized, and no principle of equity would seem to demand that society bear the cost of providing the needy with still higher-quality services.

C. *Variations in Price-Quality Combinations*

In the preceding discussion I assumed that paying customers all had the same income and utility functions and that producers all had the same production functions. I assumed further that the form of the production function implied that only one price-quality combination was produced. If, in contrast, we assume that paying customers have a range of incomes and tastes, then producers will offer a range of price-quality combinations, and a proxy shopping scheme may suffer from two defects. First, it may fail to assure that the needy receive adequate levels of quality—the quality of service obtained by the lowest-income *paying* customers might be unacceptably low. Second, it may be horizontally inequitable—not all needy people would be treated alike.

Suppose, first, that paying customers have a wide range of incomes. Lower-income people, in general, choose lower-quality and lower-priced services than do richer people, and the funding agency must ask if the lowest quality produced by the market is acceptable for the needy. If the lowest quality is unacceptable, this could be remedied by expanding the scope of the program: the near-poor could receive vouchers which subsidized a percentage of the price.

The remaining variance in quality levels may, however, continue to create horizontal equity problems among the subsidized. Instead of treating the needy equally, the plan would give them benefits that would depend upon the particular suppliers to which they had access. The same problem might arise if paying customers had different utility functions, or if firms produced a range of price and quality combinations even when paying customers had identical incomes and utility functions. The wider the range of price-quality combinations provided to paying customers, the more unequally the needy are treated. Under these conditions, a proxy shopping plan is most attractive for those policymakers who wish to avoid subsidizing very low quality levels but are not especially concerned with variations above some acceptable minimum.³⁴

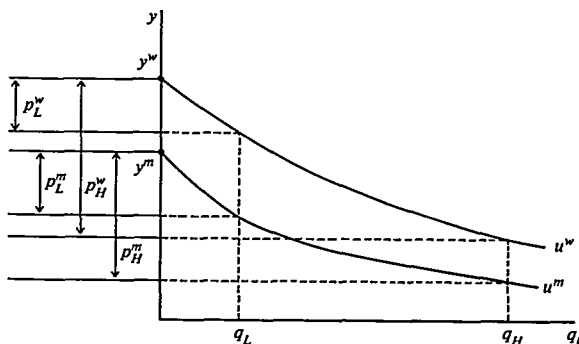
Several methods could be used to correct this problem of horizontal inequity. One approach would restrict the choices of paying customers: taxes

34. See, e.g., Fried, *Is Liberty Possible?*, 3 Tanner Lectures Hum. Values 89 (1982); Michelman, *The Supreme Court, 1968 Term—Foreword: On Protecting the Poor Through the Fourteenth Amendment*, 83 Harv. L. Rev. 7 (1969).

or regulations might limit the range of quality levels available. If the funding agency were a government with taxing power, it might be able to levy a sales tax on the service tied to the paying customer's income. This would discourage the purchase of luxury services. Obviously, such an equalizing strategy is feasible only if the good is not transferable between customers. (See the Appendix, Section B.) A regulation restricting the permissible range of quality would provide an even more drastic solution to the horizontal equity problem. There are, however, two ways to minimize horizontal inequity without increasing the scope of the program or imposing uniform quality levels on everyone. On the one hand, poor people assigned to luxury suppliers could be required to pay something for the higher benefits they obtain. So long as higher prices are, as I have assumed, associated with higher quality, charging subsidized clients fees based both on their income and on the price of services would further horizontal equity.³⁵ On the other hand, the needy could be given cash benefits based inversely on their incomes and on the quality of services they obtain.³⁶ This, of course, would raise the costs of the program.

35. Hansen & Weisbrod, *A New Approach to Higher Education Finance*, in *Financing Higher Education: Alternatives for the Federal Government* 117 (M. Orwig ed. 1971) propose a sliding-fee schedule in a study of higher education. Federal grants to the states to provide social services under title XX of the Social Security Act, 42 U.S.C. 1397 (1976), require that service providers charge fees based on income. For example, a compilation of fee schedules used by suppliers in the State of Connecticut is found in the Conn. Dep't of Hum. Resources, *Comprehensive Title XX Social Services Program Plan* for July 1, 1979-June 30, 1980, at app. D (1979).

36. Alternatively, funding agencies could require producers who accept a subsidy to show that they are serving a mixture of different income levels. A producer might do this by tailoring the price to the customer's income. A relatively low-quality supplier might charge the wealthy less than the middle class. Such a pricing strategy might be required to induce the wealthy to put up with relatively low-quality service. Similarly, relatively high-quality suppliers might charge the rich more than the middle class in order to induce the middle-class to consume luxury services. Such a constraint on supplier behavior could also limit the range of profitable quality levels. Since this plan also requires price discrimination, however, it too depends upon the nontransferability of the service. This possibility is illustrated below where y^w and y^m are the incomes of wealthy and middle class families, respectively and U^w and U^m are representative indifference curves. Two quality levels, high, H , and low, L , are provided. The prices or entry fees are p_L^w , p_L^m , p_H^w and p_H^m , for each supplier and type of customer. In the diagram $p_H^w > p_H^m > p_L^m > p_L^w$.



D. Regulation of Commercial Firms

In the basic model, the funding agency need not require all firms to serve subsidized customers. The assumption that individual subsidized customers are no more costly to serve than paying customers generally ensures that they are just as attractive to suppliers. In addition, the model's nondiscrimination condition implies that providers give comparable services to all customers.

In reality, neither of these conditions may hold in the absence of government intervention. Thus, in many situations suppliers may be in a position to discriminate against their immobile, subsidized clients, by charging them the same price as unsubsidized customers while providing them with lower-quality services. This discrimination may only be preventable by requiring that firms adopt costly organizational reforms in order to receive a subsidy. Because of the cost of such reforms, commercial firms³⁷ that refused to serve subsidized customers would be able to supply high-quality services to paying customers less expensively than would firms with a mixture of subsidized and unsubsidized customers. Proxy shopping would thus become unworkable.

To be effective in the face of these difficulties, proxy shopping must be combined with controls on commercial firms and a means must be found to assure that these controls do not cause firms to refuse to serve the subsidized. One solution is to permit firms to operate only if they adopt an organizational form that prevents discrimination. If this organizational form can be adopted more cheaply by firms with no subsidized clients, the commercial firms must further be required to accept a share of the needy. Of course, regulations of this kind, like direct regulation of quality, are not costless. Thus, such restrictions would not be efficient if the state could rely on the unregulated market to control quality. These regulations are a second-best response to the problem of quality control.

E. The Requisite Number of Paying Customers: Ineffective Shoppers, Corruption, and Integration

The assumptions made so far ensure that if a supplier serves a single unsubsidized customer, needy customers assigned to that supplier receive adequate levels of quality.³⁸ Under realistic conditions, however, eligible suppliers should be required to serve more than one unsubsidized customer. Even if paying customers are better shoppers than the needy, some of them may not have the time or information to make fully adequate judgments about quality. Requiring suppliers to serve more than one paying customer reduces the likelihood that an especially ineffective paying customer is the only control on the quality provided by a particular supplier. A related problem is the possibility of corruption through collusion between paying customers and managers.

37. These firms could be either for-profits or "commercial" nonprofits as defined by Hansmann, *The Role of Non-Profit Enterprise*, 89 Yale L.J. 835, 840-41 (1980).

38. This assumes, of course, that the unsubsidized customer receives an adequate level of quality.

This problem will be discussed more fully in Part IV in connection with medical care. In brief, it may be necessary to require the supplier to serve a significant percentage of paying customers in order to reduce the risk that all of a supplier's paying customers will be corruptible.

Finally, consider a situation, such as education,³⁹ in which the needy benefit from integration with paying customers: The ratio of paying to non-paying customers is itself a measure of service quality for the needy. If this is the case, proxy shopping cannot by itself guarantee high quality, and the share of paying customers in the total may need to be regulated directly.

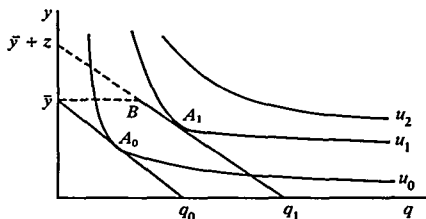
III. CONTROLLING COSTS: A COMPARISON OF PROXY SHOPPING AND VOUCHERS

Proxy shopping can be superior to a voucher plan when the needy are less effective shoppers than are unsubsidized customers. Proxy shopping, unlike vouchers, compensates for the inability of the needy to shop for quality. Suppose, however, that the funding agency believes that the needy are as well-informed and mobile as the rich, but that they ought to consume a higher quality level than they would choose if given a pure income grant. The agency, for example, might believe that the poor should consume more nutritious food or better quality housing. The agency, however, not only wishes to encourage the beneficiaries to consume higher quality levels of the good, but it would also like to achieve this goal in the most cost-effective way. This Part compares voucher programs, proxy shopping, and programs that combine the two pure types to determine which is the most effective way to control quality.

Voucher programs can take several forms, but I consider the two most basic and commonly proposed varieties: a voucher which pays a fixed sum and one which finances a specified percentage of the price. Consider, first, a fixed-sum voucher plan, where beneficiaries receive vouchers worth a set amount, say Z dollars, which can be used only to purchase some good X . Thus, the funding agency pays the entire cost up to a fixed ceiling, and beneficiaries pay all costs above that level. Such a plan has little to recommend it as a means of encouraging increased consumption of quality while controlling costs. If the ceiling is exceeded, beneficiaries will consume the same level of quality as they would if given a cash grant.⁴⁰ By hypothesis, though, the funding agency

39. See *infra* Part IV C.

40. To see this, consider the diagram below.



wants them to consume a level of quality higher than this. If, on the other hand, the ceiling is not exceeded, the needy exhaust the full value of the voucher on the highest quality service available, even if increments in quality are worth very little to them.⁴¹ Thus, a fixed-sum voucher plan will either fail to encourage the consumption of quality beyond that chosen with an income grant, or it will be unnecessarily costly.

Second, suppose that the voucher is designed to reimburse the supplier for a specified percentage of the price charged to the beneficiary. Beneficiaries pay at least some of their own money for even the cheapest good, and have an incentive to be cost conscious: if they choose more expensive goods, their own contribution will rise. Although perhaps preferable to fixed-sum vouchers, percentage-of-the-price vouchers are not clearly superior to proxy shopping even when the needy are effective shoppers. In the Appendix, I show that in order to make beneficiaries as well off as they would be under the comprehensive subsidy given by a proxy shopping plan, the funding agency may have to subsidize a very high percentage of the price. This could happen if the needy have a very weak demand for quality. With proxy shopping, they receive a fixed quality at no cost. With percentage-of-the-price vouchers they must pay something for each increment in quality. If \hat{q} is the proxy shopping level, and if β is the share of the price paid by the needy, then the problem is to find a q_β such that the needy are indifferent between obtaining \hat{q} for free and obtaining q_β at the subsidized price. Obviously, the needy now choose a quality level above that chosen by paying customers ($q_\beta > \hat{q}$). Let \hat{p} be the price of \hat{q} and p_β be the higher price of q_β . Then it is quite possible for \hat{p} to be less than $(1 - \beta)p_\beta$. In other words, the quality selected by the needy could require a higher per capita subsidy than proxy shopping.

The recent escalation in medical-care costs and in spending for Medicare and Medicaid—programs similar to open-ended percent-of-the-price vouchers—appears to reflect exactly the problem described above.⁴² Several current proposals to halt this escalation would continue to permit beneficiaries to

The income an individual has available for spending on other goods, y , is on the vertical axis and the quality, q , of the fixed quantity of the subsidized good is on the horizontal axis. The individual's preference function is represented by the indifference curves labelled u_0, u_1, u_2 . With no voucher plan, his total income is y , and, given the price of quality, his budget line extends from y to q_0 . The individual chooses point A_0 where his utility is maximized given his budget constraint. With a fixed sum voucher worth Z dollars of quality, the budget line originates at B and extends to q_1 , and the person chooses point A_1 . This is exactly what he would do, if instead, the program provided a cash supplement of Z dollars.

Recent studies indicate that a high proportion of food stamp recipients spend more than their food stamp allotment on food, so that the program essentially provides an income supplement. Except for very large households with six or more people, at least 65% of recipient families spent more than their food stamp allotment on food. See Science and Educ. Admin., *supra* note 13, at 15. Both Clarkson, *supra* note 12, and MacDonald, *supra* note 12, however, conclude that food stamps lead to greater expenditures on food than an equivalent cash grant. Food and Nutrition Service, *supra* note 12, at 70-96, confirms these findings for elderly recipients.

41. Thus in this case point A_1 in the diagram in note 40 above would fall into the unreachable portion of the budget line between B and $y + z$. The individual would pick point B .

42. See Health, *supra* note 22, 273-76. The authors report that "Federal spending on medical care rose twelvefold between 1965 and 1980 . . . [and] health's share of private incomes

choose the quality levels they consume but would reduce the share of costs reimbursed by the government.⁴³ The needy, though, may be better off under a variant of the proxy shopping plan, which subsidizes all or a high percentage of costs, but requires the needy to consume the same quality levels as paying customers. As I show below,⁴⁴ however, proxy shopping is not a panacea. Some of the quality-control problems in medical care are too deepseated to be solved by an increase in competitive pressures.

Vouchers and proxy shopping, however, need not be mutually exclusive. For example, holders of food stamps—a pure voucher program⁴⁵—purchase their food in ordinary stores where most customers are unsubsidized. There does not seem to be any tendency for sorting by subsidy status per se, and the choices of unsubsidized customers help assure high-quality food for the needy. Thus, a program might combine features of proxy shopping and vouchers by providing vouchers that could only be honored by suppliers who also serve paying customers. To limit the financial commitment of the funding agency, the voucher could be of the fixed-sum variety. Although, as shown above, a fixed-sum voucher plan is an ineffective mechanism for quality control,⁴⁶ the proxy shopping aspect of the plan would remedy this deficiency.

A combined program may be a useful compromise when the needy are fairly competent shoppers but the funding agency is concerned that some beneficiaries lack the time, information and bargaining power to make informed choices. If the poor are, in fact, good judges of quality, then they may be required to consume *lower* quality services than under a pure voucher system because their choice of suppliers has been circumscribed. But if they are not, the proxy shopping feature of the plan—requiring suppliers who honor vouchers to serve paying customers—will put a floor under quality.

The main difficulty with a plan that combines fixed-sum vouchers and proxy shopping is determining the amount of the voucher. To encourage efficient and informed shopping, the voucher amount should be set before purchase decisions are made. If, by mistake, it is set substantially below the prices charged paying customers, the program will break down—no suppliers will be willing to provide services at the reimbursement rate offered by the funding agency, and poor people are not likely to be willing to make up the difference. Neither pure proxy shopping nor percentage-of-the-price vouchers have this problem since the subsidy level will not be set until after market

rose by 23 percent, from 6 to 7.4 percent. . . . Medical price increases . . . accounted for more than half the spending increases between 1965 and 1980 and three-quarters of the increase between 1975 and 1980.” *Id.* at 274. Of course, Medicaid and Medicare are not the only cause of price increases. Private insurance combined with the exclusion from federal income tax of employer payments to health insurance plans also played a role. *Id.* at 276. Medicare does include a deductible payment for hospital care and nonhospital physician’s care and imposes a limit on covered hospital days. *Id.* at 283.

43. See *supra* note 23.

44. See *infra* notes 58–73 and accompanying text.

45. See *supra* notes 11–13 and accompanying text.

46. See *supra* notes 40–41 and accompanying text.

prices are determined. They have the opposite problem: the funding agency may discover ex post that the program is more expensive than it expected.

IV. APPLICATIONS OF THE "PROXY SHOPPING" PROPOSAL

If a market provides adequate quality levels to paying customers, and if the needy and the unsubsidized have comparable tastes, the funding agency may well decide that its quality-control goals will be fulfilled if the needy obtain the same quality as paying customers. As discussed more fully in Part II, proxy shopping can be used to attain this goal if four conditions are met: (1) a large proportion of paying customers are indifferent to consuming the service alongside the subsidized; (2) suppliers are willing to accept subsidized customers on the same financial terms as unsubsidized clients; (3) the market allows the mixing of customers with different income levels (the mixing-and-sorting condition); and (4) suppliers serve subsidized customers in a nondiscriminatory manner (the nondiscrimination condition). If, in addition, paying customers are mobile and subsidized customers are not, proxy shopping will assure high quality while vouchers will not.

With these conditions in mind, this Part illustrates the strengths and weaknesses of proxy shopping when compared with both vouchers and more direct methods of regulation. I consider its application to three important problems: the care of the deinstitutionalized mentally retarded, the provision of subsidized health care, and the integration of classroom instruction by race and class. None of these services satisfies all the assumptions of my model, but deinstitutionalization comes the closest. In addition, my proposed system can play a limited but useful role in controlling the quality of health care. It will, however, be entirely unworkable in education if paying customers are prejudiced and dislike integrated instruction.

A. Care of the Deinstitutionalized Mentally Retarded⁴⁷

In recent years, a major change in the treatment of the mentally retarded has occurred. Thousands of retarded children and adults have been released from large state residential institutions and now live at home or in smaller regional centers, group homes, and skilled nursing facilities.⁴⁸ During the day, sheltered workshops, specialized day care centers, and regular public schools provide programs. This deinstitutionalization movement has attracted many

47. I am grateful to Anita Miller for research assistance on this Section. For a fuller analysis of policy problems in the field of mental retardation, see Rose-Ackerman, *Mental Retardation and Society: The Ethics and Politics of Normalization*, 93 *Ethics* 81 (1982).

48. Lakin reports that the total number of people in public residential facilities for the mentally retarded fell from 194,650 in 1967 to 139,432 in 1978. In 1967, 99 per 100,000 people in the total population were in such institutions. By 1978, the number was 65 per 100,000. Lakin, *Demographic Studies of Residential Facilities for the Mentally Retarded: An Historical Review of Methodologies & Findings*, Project Report #3, Developmental Disabilities Project on Residential Services and Community Adjustment, University of Minnesota (1979) (on file at the offices of the Columbia Law Review).

committed supporters among professionals who care for the retarded,⁴⁹ and has spread quickly, if unevenly, across the country.⁵⁰ The program obtained political support as a result of highly publicized scandals involving the low quality of care provided by some large institutions.⁵¹ Predictably, however, quality-control problems are also arising in the newly decentralized systems. State funding agencies are not adequately equipped to monitor suppliers, and investigative journalists have uncovered poor conditions in group homes, special schools, and sheltered workshops.⁵² Clearly, direct monitoring and inspection by the state are more costly and difficult when 100 small suppliers, instead of two or three large ones, supply a highly differentiated service. It seems worthwhile, then, to ask whether market mechanisms might be used to help assure quality.

Since the retarded cannot be expected to judge quality by themselves, any market-like scheme must rely on the parents and close relatives of the retarded. Many retarded children and adults, however, have no families willing to take this responsibility. A voucher plan obviously would be ineffective for that group. Nevertheless, it may be possible to use proxy shopping to provide market pressures for high-quality care since the conditions specified in the basic model appear to be approximately satisfied.⁵³ It is especially important, however, to be sure that the nondiscrimination condition is fulfilled. Favored treatment of unsubsidized clients is less of a problem when services are consumed in common by all clients. For example, discrimination is less likely in a sheltered workshop, which gives retarded people experience in working with others, in sharing equipment, and in being part of a cooperative activity.

49. Nirje, *The Normalization Principle and Its Human Management Implications*, in *President's Comm'n on Mental Retardation, Changing Patterns in Residential Services for the Mentally Retarded* 179 (1976); Wolfensberger, *The Origin and Nature of Our Institutional Models*, in *President's Comm'n on Mental Retardation, Changing Patterns in Residential Services for the Mentally Retarded* 59 (1976). See generally Balla, Butterfield, & Zigler, *Effects of Institutionalization on Retarded Children: A Longitudinal Cross-Institutional Investigation*, 78 *Am. J. Mental Deficiency* 530 (1974); Biklen, *The Case for Deinstitutionalization*, 10 *Soc. Pol'y* 48 (1979) (citing a number of studies published in the 1950's and 1960's that advocated deinstitutionalization).

50. *President's Comm'n on Mental Retardation, Mental Retardation Past and Present* 204 (1977) (recording the percent change in number institutionalized by state between 1970 and 1975).

51. Biklen, *supra* note 49, at 49-50, reviews the history of public support for deinstitutionalization of the retarded in the United States.

52. Both professional and popular criticism of current deinstitutionalization programs is growing, with quality-control and monitoring difficulties a major concern. See, e.g., Edelson, *Deinstitutionalization: Avoiding Disaster*, National Association of Superintendents of Public Residential Facilities (1979) (unpublished manuscript); Etzioni, *Deinstitutionalization . . . A Vastly Oversold Good Idea . . .*, *Colum.*, Spring 1978, at 14; Throne, *Deinstitutionalization: Too Wide a Swath*, 17 *Mental Retardation* 171 (1979); Gettings, *Tentative Outline of Discussion Topics: NASMRPD White Paper on the Future of Residential Services for Mentally Retarded Persons* (1979) (unpublished manuscript) (emphasizing the problem of assessing services in a decentralized system.)

53. Of course, before putting a plan into effect locally, policymakers would need to study the market to be sure that a large number of suppliers do exist, that the mixing-and-sorting condition is satisfied, and that wealthy parents are well-informed and careful shoppers.

The nondiscrimination problem becomes more serious when services are provided to retarded clients individually. Then, the suppliers must be organized so that the staff either does not know which clients receive subsidies or has no incentive to treat clients differently. If it is impossible to organize the agency in this way, the establishment of professional training programs that emphasize equal treatment of clients regardless of wealth might accomplish the same end.⁵⁴ As argued earlier, these methods of providing individualized care must be coupled with a policy that carefully regulates entry to prevent firms that accept no subsidized clients from attracting all the paying customers.⁵⁵

Of course, many poor retarded people do have relatives to make choices for them, and vouchers could be given to this group. Even in this case, however, funding agencies may believe that the choices of paying customers will more adequately protect the interests of the retarded than the choices of relatives. There are two reasons for this belief. First, policymakers may believe that poor parents are likely to have relatively little leisure time or money available to investigate quality. The opportunity cost of shopping for quality may be lower for paying customers than for needy clients.⁵⁶ Second, the funding agency may fear that some parents will sign up for the voucher scheme even though they care very little about their retarded offspring. They might then try to monetize the vouchers by turning them over to low-quality suppliers in return for cash. In contrast, the parents of unsubsidized children, who by definition are willing to pay some of their own income for care, must have at least some minimal concern for their children's welfare. This is not to say that poor people, in general, are less caring than wealthy people, but rather that, with vouchers, it is impossible to sort out uncaring people *ex ante*.

If some of the retarded have relatives who are effective monitors while others do not, then it may be possible to set up a fixed-sum voucher system constrained by the requirement that a facility also serve a substantial number

54. Eliminating discrimination through training programs that emphasize equal treatment of clients could be a mixed blessing. A study of 30 institutions caring for the retarded classified certain practices as "institution-oriented" or "resident-oriented." McCormick, Balla, & Zigler, *Resident-Care Practices in Institutions for Retarded Persons: A Cross-Institutional, Cross-Cultural Study*, 80 *Am. J. Mental Deficiency* 1 (1975). Practices were labeled "institution-oriented" if they treated all children identically in the sense of creating rigid routines and regimented practices and providing little opportunity for self-expression and initiative. *Id.* at 4-5. Clearly, uniformity of treatment is not always the most effective or humane institutional objective. The difficulty, of course, is that if an institution becomes more "resident-oriented" without a corresponding increase in personnel, the staff may concentrate on caring for the more "appealing" children and for those whose parents are most likely to complain about poor treatment. Therefore, the nondiscrimination condition may not be satisfied.

55. See *supra* Section II D. Of course, even the most well-informed parents will not be able to find out everything they would like to know about alternative methods of care. Professional opinion is divided and much research needs to be done. There does not, for example, appear to be an adequate study of the impact of different kinds of community-based care. Cf. C. Wieck & R. Bruininks, *The Cost of Public and Community Residential Care for Mentally Retarded People in the United States* (1980).

56. This may be true in spite of the lower hourly wage of poor people. The value of an hour spent monitoring will be low in dollar terms but high in utility terms since the hour must be subtracted from work or from time available to take care of home and family.

of paying customers.⁵⁷ Retarded clients without families would simply be assigned to a supplier.

B. *Health Care—HMO's and Nursing Homes*

In the current debate over health policy, several commentators have suggested using Health Maintenance Organizations (HMO's) to provide subsidized care to needy people.⁵⁸ Recognizing that quality control could be a problem in HMO's, Clark Havighurst⁵⁹ has proposed mixing subsidized and unsubsidized patients together as a way of improving quality for the poor. He recommends using the fees charged to unsubsidized patients as a guide to help determine the government's subsidy rate and points out that this kind of reimbursement scheme "makes each potential private subscriber a sort of proxy who would 'shop' for health services not only for himself but also for . . . [needy] clients."⁶⁰ Some of his ideas are reflected in the Health Maintenance Organization Act of 1973, which attempts to promote the growth of HMO's.⁶¹ Regulations originally promulgated under the Act limited Medicaid and Medicare beneficiaries to no more than fifty percent of the total enrollment in a particular HMO.⁶² However, reimbursement rates appear to have been set so that paying customers subsidize Medicaid and Medicare patients.⁶³ Proxy shopping cannot work to assure high quality under such conditions.

The chief problem with Havighurst's proposal, however, is not that it has been misapplied, but that he did not carefully consider the conditions necessary for its success. He therefore has overstated the potential benefits of proxy shopping in this context. While the scheme has merit in controlling some aspects of health care quality, its value should not be exaggerated.

Havighurst's analysis has three weaknesses. First, although he recognizes that an HMO should not be permitted to establish a ghetto branch and a suburban branch,⁶⁴ Havighurst appears to believe that each individual HMO office will, without any direct regulation, provide the same quality of service to all patients. He fails to recognize that satisfaction of the nondiscrimination

57. For an analysis of the advantages and disadvantages of such a system see *supra* Part III.

58. See, e.g., Health Maintenance Organizations, Parts 1-4: Hearings on H.R. 5615 and H.R. 11728 Before the Subcomm. on Public Health and Environment of the Comm. on Interstate and Foreign Commerce, 92d Cong., 2d Sess. (1972). Note especially the testimony of Walter McClure, *id.* at 464-89, Clifton Cole, *id.* at 1428-33, and Joseph Dorsey, *id.* at 1418-28.

59. See Havighurst, *supra* note 5.

60. *Id.* at 730.

61. 42 U.S.C. § 300e (1976). See generally Stern, Health Care Expansion: Provisions of the Health Maintenance Organization Act of 1973, 8 Clearinghouse Rev. 89 (1974); Schneider & Stern, Health Maintenance Organizations and the Poor: Problems and Prospects, 70 Nw. U.L. Rev. 90 (1975).

62. 39 Fed. Reg. 37,316 (1974); see also Schneider & Stern, *supra* note 61, at 106.

63. According to Schneider & Stern, *supra* note 61, at 110, "HMO's are under no obligation, and may well have no particular incentive, to seek to enroll [Medicaid and Medicare enrollees] . . ." Enrollees may have high expected health costs which are not reflected in government reimbursement formulas. The authors thus go on to argue that the dual track system of health care will be unchanged by the Act. *Id.* at 98-99.

64. Havighurst, *supra* note 5, at 731 n.48.

condition is essential to the success of proxy shopping and that, absent regulation, discrimination between subsidized and paying customers is likely. Since most health care is inevitably individualized, the nondiscrimination condition will not automatically be satisfied. There is no analog to the classroom or the sheltered workshop. Therefore, organizational reform must accompany any move to proxy shopping. HMO regulations must make sure that the staff either does not know which patients are subsidized or has no incentive to discriminate. To ensure a mix of paying and nonpaying customers, the plan must regulate or outlaw for-profit and commercial nonprofit HMO's that serve only paying customers. This could be done, for example, by requiring all HMO's to take a share of the subsidized population.⁶⁵

Second, Havighurst does not explicitly discuss the possibility of corruption. Through collusion between suppliers and paying customers, the latter might be nominally overcharged. Since the amount the funding agency pays for each subsidized customer depends on the amount charged paying customers, the supplier would illicitly profit from the nominal overcharge. He would then kick back a portion of this amount to the paying customers who collude in this scheme. Managers could also use kickbacks to compensate for lower quality service, or secretly redesign the service to provide specialized benefits to those who pay fees.⁶⁶ In fact, "paying customers" might not even turn up for services. In this situation, the manager could either invent paying customers by constructing fake patient records or else pay kickbacks larger than the fee to induce people to register who receive no services. In order to make these strategies both more costly for managers and more difficult to conceal, the state could require that a significant fraction of clients be paying customers. Havighurst does, in fact, recommend that at least one-half of each HMO's patients be unsubsidized.⁶⁷ He does not explain why fifty percent is better than one percent, but perhaps he implicitly recognizes the possibility of corruption and favored treatment.

Third, although Havighurst realizes that HMO's may have an incentive to provide too little care in the face of patient ignorance,⁶⁸ he seems remarkably sanguine about the ability of patients—either paying *or* subsidized—to judge quality. He defends his proposal by saying that it "would control costs to the government not by introducing a cumbersome system of quality and cost audits but by relying on the private consumer, who is still the most sensitive indicator of relative values yet discovered."⁶⁹ Yet, it is a commonplace in medical economics to observe that neither paying customers nor their

65. The main difficulty here is the possible violation of the mixing-and-sorting condition, discussed *supra* text accompanying note 32. Few HMO's may be established in low income neighborhoods and those in more wealthy neighborhoods may be inconvenient for the poor to use.

66. Cf. S. Rose-Ackerman, *Corruption: A Study in Political Economy*, 85-108, 137-166 (1978).

67. Havighurst, *supra* note 5, at 730.

68. *Id.* at 742-43.

69. *Id.* at 730.

relatives are likely to be good judges of many dimensions of quality.⁷⁰ The demand for health care is determined in significant part by doctors rather than patients, and widespread insurance coverage blunts the price consciousness of consumers. Thus, relying on the market decisions of paying customers as the central means of assuring high quality for the subsidized seems somewhat unrealistic in the context of medical services.

In spite of these difficulties, patients can evaluate some aspects of health care quality, such as the length of the wait in the HMO office, the length of the appointment, the pleasantness of the doctors' personalities, the availability of equipment, and the appearance of the offices and waiting rooms. Unfortunately, none of these services is priced separately. Therefore, HMO's might reduce the quality of other services in order to compete on the basis of easily observable characteristics. However, even if patients cannot diagnose their own ailments, an HMO's general reputation is likely to be fairly well-known. Thus large-scale misrepresentations of this kind may be relatively difficult to sustain. Furthermore, since paying customers are unlikely to patronize HMO's that score very badly on these characteristics, all HMO's catering to this group must supply these services at fairly high levels of quality. Only HMO's which face no market pressures can seriously skimp. Of course, this list of observable characteristics does not by itself add up to high-quality medical care, but it is one small but important part of the package of services. So far as proxy shopping is concerned, however, only the last two items on the list—equipment and appearance of facilities—are consumed jointly by patients. Thus, the first three services could be provided in a discriminatory way to the locked-in, subsidized patients. The length of a paying customer's appointment may, for example, be a poor measure of the appointments of subsidized patients.

Andreano and Nyman⁷¹ develop a similar proxy shopping proposal for Medicaid reimbursement of nursing home care. They propose a sliding scale under which payments increase with the proportion of paying customers a nursing home can attract. They believe that their variant on the proxy shopping plan will help assure the high quality, efficient operation of nursing homes, but they recognize that the government may need to provide information on homes to private customers and that it will have to regulate directly those characteristics which are difficult for ordinary customers to observe or evaluate.⁷² However, the authors ignore the possibility that nursing homes may systematically discriminate against subsidized customers in some aspects of care. As with Havighurst's model, direct regulation may be needed to assure that the nondiscrimination condition is met. For example, devising

70. See, e.g., Bovbjerg, *Competition vs. Regulation in Medical Care: An Overdrawn Dichotomy*, 34 Vand. L. Rev. 965 (1981); Marmor, Boyer & Greenberg, *Medical Care and Procompetitive Reform*, 34 Vand. L. Rev. 1003 (1981).

71. See Andreano & Nyman, *supra* note 5; Nyman, *supra* note 5.

72. Andreano & Nyman, *supra* note 5, at 18-19.

payment mechanisms that would keep management and staff ignorant of which customers are subsidized would help to accomplish this end.

In spite of these caveats, proxy shopping seems a potentially more effective quality control device for nursing homes than for HMO's because nursing home care is subject to less professional control and requires less esoteric scientific training. Most nursing home employees are not medical doctors, and most of the services they provide are fairly easy for lay people to evaluate. Thus, market decisions by paying customers can be used to help assure high quality for the needy.

In contrast, only trained professionals can fully ascertain the quality of medical care offered by HMO's. Despite this drawback, the use of proxy shopping in HMO's merits continued consideration, especially in light of the inadequacy of existing quality-control mechanisms. Exposés of fraud and poor care in some HMO's catering only to the poor⁷³ show the need for very basic quality checks. Although proxy shopping cannot, for example, assure regulators that doctors perform only operations that are medically justified, it can at least uncover the existence of under-staffed, under-equipped offices located in out-of-the-way places and open only at inconvenient times. Proxy shopping could then be combined with the current system in which beneficiaries can choose which HMO, doctor, or hospital to use. In situations where fraud and incompetence are a problem, requiring HMO's to serve some paying customers might be an effective way to remedy the worst abuses, even if—for the reasons described above—it fails to equalize treatment for rich and poor. In sum, though difficulties arising from the individualized nature of health care and the ignorance of consumers limit the usefulness of "proxy shopping" for HMO's, it may still be of significant value.

C. *Integrated Schooling*

For vouchers, the mobility of the consumer is an essential prerequisite to ensuring the distribution of high quality social services. Absent mobility, the consumer can make no meaningful, quality-based choices, and the system does not effectively regulate quality. In contrast, under proxy shopping the poor can be entirely immobile. Provided that the unsubsidized are mobile, the nonpaying consumer will be assured high-quality service. In one class of cases, however, the mobility of paying customers makes it *harder* to provide high-quality services to the needy. Because education falls in this class, as this

73. Chavkin & Treseder, *California's Prepaid Health Plan Program: Can the Patient be Saved?*, 28 *Hastings L.J.* 685 (1977); Schneider & Stern, *supra* note 61, at 130-34; see also Mitchell & Cromwell, *Large Medicaid Practices and Medicaid Mills*, 244 *J. A.M.A.* 2433 (1980). Mitchell and Cromwell provide statistics on physicians who care for large numbers of Medicaid patients. They estimate that more than 30% of all Medicaid patients are cared for by physicians whose practice includes at least 50% Medicaid patients. These doctors provide only slightly shorter visits on average but they do tend to be older, to be trained in foreign medical schools, and to have fewer credentials than other physicians. *Id.* at 2435.

Section will argue, neither vouchers nor proxy shopping can be viable mechanisms for regulating quality.

Suppose that all paying customers are prejudiced against the needy. In that case, proxy shopping clearly will be completely ineffective, since no supplier who serves subsidized customers will be able to attract any paying customers. To see the problem, consider a variant on the basic proxy shopping model. Under this educational system, parents pay for the education of their children if their income is above a certain level. Many different schools are available to these parents. The education of poor children is subsidized by the state, and these children are assigned to particular schools. The school board relies on the choices of the wealthy to assure high quality for the needy. A school is only subsidized if some unsubsidized parents send their children to that school. If, however, the wealthy prefer their children not to interact with the poor, new schools will be founded which cater only to wealthy children. The system will break down with the unsubsidized and subsidized clustering in different schools. A voucher plan would not be any more effective. Clustering by income level would still occur unless all schools were required to accept an equal share of the needy, or the wealthy were compensated to accept integration.⁷⁴

A more subtle problem may arise even if some paying customers are not prejudiced and are willing to use the facilities to which the needy are assigned. If the quality of classroom instruction is at issue, these few unprejudiced paying customers might adequately control quality for the needy and a proxy shopping plan might be completely effective. Suppose, however, that the needy benefit from integration. Poor children, for example, might learn more if put in classrooms with middle-class children. In these situations, the needy will not obtain high-quality services unless a significant number of the privileged are induced to participate. To ensure high quality for the needy, subsidy payments must therefore be given only to suppliers who serve a relatively high proportion of paying customers. However, the relatively small group of unprejudiced paying customers may not be sufficiently numerous to provide adequate integration of service facilities. Again, neither vouchers nor proxy shopping will be effective quality-control devices.

CONCLUSION

An antimarket ideology that seeks to purge social services of any link to the price system for value received has frequently hampered the design of mechanisms to assure high-quality social services. Richard Titmuss was probably the leading advocate of this antimarket view. In his famous study of human blood, he concluded that a market in blood would produce lower-quality supplies than a system based on gift-giving.⁷⁵ While his observations

74. For a series of closely related models, see T. Schelling, *Micromotives and Macrobehavior* 135-90 (1978).

75. R. Titmuss, *The Gift Relationship: From Human Blood to Social Policy* (1971). He may, however, have overstated the quality-control benefits of gift giving. For example, Kessel argues

may be relevant when charities are concerned with the quality of donated inputs, the main issue of quality control for most public welfare activities is not the supplier's monitoring of donors, but the monitoring of the supplier by private donors and public-funding agencies. Even if all inputs are donated, an organization must combine them to produce services. Private donors and public agencies may then have difficulty knowing whether the provider produces high-quality services. Given this difficulty, isolating social-service providers from market pressures can lead to low-quality, wasteful operation. My analysis of the merits of proxy shopping thus contrasts sharply with Titmuss's broad indictment of the use of market incentives to support altruistic public welfare goals.

Any endorsement of proxy shopping must, however, be tempered by a note of caution. In assessing the value of paying customers as monitors of quality, policymakers must analyze each service on its own merits, contrasting proxy shopping with a system of vouchers, with direct regulation, and with various mixed policies. Several questions must be answered. Are the needy poorly informed or limited to a few suppliers? If so, then vouchers are not feasible and proxy shopping should be considered. Next, is it desirable to use the choices of paying customers as proxies for the choices of the needy? Are paying customers good judges of quality? Do they rank quality levels in the same way as do the needy? Can the industry efficiently support enough suppliers to assure that paying customers have adequate options? If these questions are answered affirmatively, it may be desirable to use paying customers to assure high quality services for all. Before proxy shopping can be advocated, however, four further questions must be resolved. First, is a substantial fraction of paying customers indifferent to the mix of rich and poor? Second, can the service be organized so that the suppliers' staffs either have no incentive to, or cannot, distinguish between paying customers and the needy? Third, will new firms that serve only paying customers be permitted to enter the sector? If they do enter, must they be regulated? Entry is desirable if providers need not be organized to prevent special treatment of paying customers. Otherwise, such firms must either be outlawed or regulated to prevent "cream-skimming." Fourth, how will donors or government funding agencies reward suppliers? If a supplier obtains funds from several sources, all of them must act together.

The choice of proxy shopping as the most effective regulatory scheme ultimately turns on these empirical issues as well as on judgments about the effectiveness of vouchers and direct regulation. Although pure examples in which proxy shopping is the only workable scheme are hard to locate, it is an idea worth taking seriously given the difficulty of finding effective methods of quality control. The widespread dissatisfaction with direct regulation, and the quality-control potential of market pressures, therefore, suggest that a creative combination of vouchers, proxy shopping and direct regulation may, in many cases, be the best regulatory alternative.

that a market system with liability imposed on blood banks would be most efficient. Kessel, *Transfused Blood, Serum Hepatitis, and the Coase Theorem*, 17 J.L. & Econ. 265 (1974).

APPENDIX

This Appendix presents a model designed to illustrate the results discussed in Parts II and III of the text. Using a simple production function for quality, I show how a proxy shopping plan operates when the subsidy rate is set equal to the price paid by unsubsidized customers. Next, I develop a subsidy scheme that leads everyone to choose the same level of quality in spite of income differences. Finally, I compare vouchers and proxy shopping.

A. *Paying Customers and Quality Control*

Suppose that there are two kinds of consumers of a product—needy, subsidized consumers and paying customers. The quality of the product can be measured by an index, q , such that all people value higher levels of q more than lower levels. Quality is independent of the ratio of needy to paying clients. Everyone who uses the product consumes one unit, and no one can patronize more than one supplier. Paying customers all have the same incomes, \bar{y} , and the same tastes defined over quality levels, q , and spending on other goods, y . Thus, they have,

$$U(q, y), U_q > 0, U_y > 0.$$

Let:

q_i = quality level of supplier i , $i = 1, \dots, m$;

p_i = price charged by supplier i for one unit of good of quality q_i .

Then each paying customer chooses the supplier at which his or her utility is maximized, subject to the condition that $\bar{y} = p_i + y$. Given the assumed uniformity of tastes and incomes, this implies that in equilibrium:

$$U(q_i, \bar{y} - p_i) = U(q_j, \bar{y} - p_j), \quad (1)$$

for all i and j which serve at least one paying customer. Thus if $q_i > q_j$, then $p_i > p_j$. Furthermore,

$$U(q_k, \bar{y} - p_k) < U(q_i, \bar{y} - p_i), \quad (2)$$

for all k which serve no paying customers and all i which serve paying customers.

Now suppose that each producer is assigned w_i needy clients where $w_i \geq 0$. Suppose that congestion exists so that for a given expenditure on other inputs, quality is higher the fewer the customers who patronize i . Each firm has an identical cost relationship,

$$C(q_i, n_i), \text{ with } C_q > 0, C_n > 0, \frac{d(C_q)}{dn} \geq 0,$$

where n_i = number of customers both subsidized and unsubsidized.

Suppliers are either charities or for-profit firms. For-profits maximize profit, π_i , charity managers maximize total budget, R_i , s.t. a break-even

condition. Subsidies are provided by a single agency or coalition of agencies which sets the pay-out rule, S_i . Thus charity i maximizes

$$R_i = S_i + p_i(n_i - w_i) \text{ s.t. } C(q_i, n_i) \leq R_i$$

and the for-profit maximizes

$$\pi_i = S_i + p_i(n_i - w_i) - C(q_i, n_i), \text{ s.t. } \pi_i \geq 0.$$

This model is complicated by the possibility of congestion. Congestion makes equilibrium conditions difficult to specify because the number of customers affects the cost of producing quality.⁷⁶ Thus, to make the analysis tractable, I shall use a very simple form for the production function for quality. Suppose that quality depends on the level of purchased inputs, b_i and on n_i so that

$$q_i = \frac{b_i}{n_i}.$$

Thus, if purchased inputs double, q_i doubles, but if both b_i and n_i increase by the same proportion, quality is unchanged. Suppose that inputs are purchased at a fixed price of one dollar per unit. Then, total cost is $q_i n_i$ dollars and cost per client is q_i dollars. This form of production function for q_i has the same disadvantage as all constant returns to scale functions: the size of the firm is indeterminate. A more complex analysis would introduce decreasing returns to scale as a function of n_i .

With no subsidized customers, nonprofits maximize $p_i n_i$ subject to $p_i n_i \geq q_i n_i$, or $p_i \geq q_i$ while for-profits maximize $p_i n_i - q_i n_i$ s.t. $p_i \geq q_i$. If one producer sets $p_i > q_i$, any other producer can obtain all his customers by offering a slightly higher q_i (or lower p_i). Thus, competition combined with revenue maximization and/or profit maximization produces a situation where

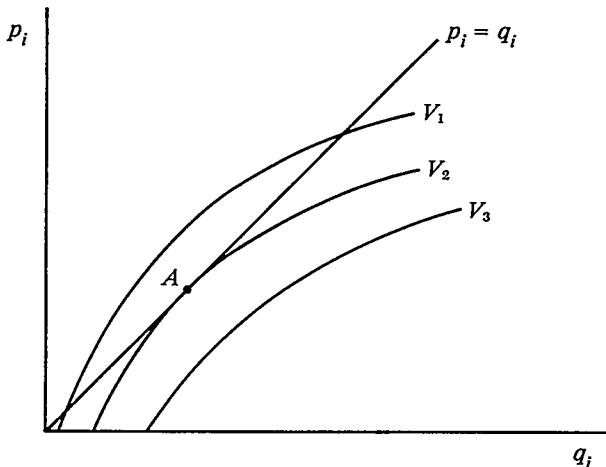


FIGURE A-1

76. See Porter, *The Economics of Congestion: A Geometric Review*, 6 Pub. Fin. Q. 23 (1978).

$p_i = q_i$ for all i . The equilibrium level of $p_i = q_i$ will be the one that maximizes $U(q_i, \bar{y} - p_i)$. To illustrate this graphically, transform U to q_i, p_i space, i.e. let $V(q_i, p_i) = U(q_i, \bar{y} - p_i)$. Then, in Figure A-1, $p_i = q_i$ is the "offer curve" of producers and point A is the equilibrium with no subsidized customers and many suppliers (note that $V_3 > V_2 > V_1$). A critical feature of this simplified model is that in equilibrium, all paying customers consume the same price-quality combination. In a more general formation, some suppliers might provide low q and low p combinations while others provided equally attractive high q and high p combinations.

Now consider the following subsidy strategy. The donor requires each charity or firm i to serve at least one paying customer, i.e. $n_i > w_i$, and provides a subsidy of $p_i w_i$ if this condition is met. Given the break-even condition, $p_i = q_i$, there is a single p_i, q_i combination that maximizes the utility of paying customers. The supplier must choose this point if it is to serve any paying customers.

B. Income Differences

The model can be extended to cover the case where paying customers have a range of incomes but the same underlying tastes. Let $r = 1, \dots, t$ represent the different income classes. The lower a person's income, \bar{y}_r , the lower is $\bar{y}_r - p_i$ for a given p_i . Therefore, assuming a diminishing marginal utility of income and of quality, a poorer person values reductions in p_i relatively more than a wealthy person. This implies that in p_i, q_i space, the indifference curves are "flatter," i.e. dp_i/dq_i is smaller, the lower a person's income. Poorer people must receive relatively large quality increases in order to compensate them for an increase in the price of quality. Figure A-2 includes

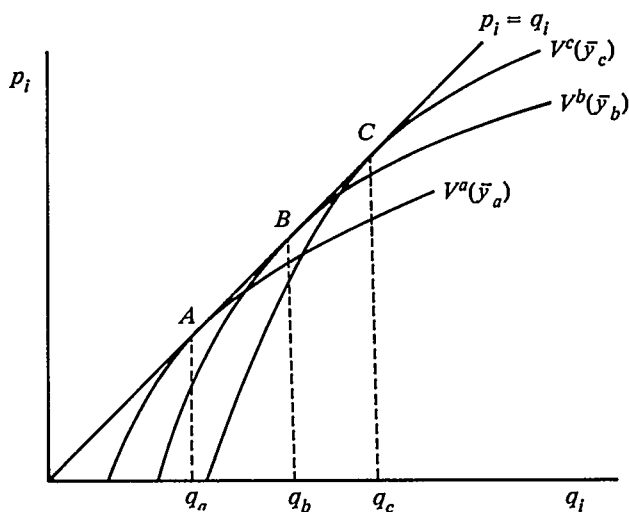


FIGURE A-2

representative indifference curves of people with three different income levels where $\bar{y}_a < \bar{y}_b < \bar{y}_c$. At any point p_i, q_i ,

$$\frac{\partial V^a}{\partial q_i} \bigg/ \frac{\partial V^a}{\partial p_i} \leq \frac{\partial V^b}{\partial q_i} \bigg/ \frac{\partial V^b}{\partial p_i} \leq \frac{\partial V^c}{\partial q_i} \bigg/ \frac{\partial V^c}{\partial p_i}$$

Given the charities' "offer curve" of $p_i = q_i$, people maximize $U(\bar{y}_i - p_i, q_i)$. This yields

$$\frac{\partial U}{\partial(\bar{y}_i - p_i)} = \frac{\partial U}{\partial q_i}.$$

Suppose that this condition holds at $p_a = q_a$ for someone with income \bar{y}_a . Then, consider a person with $\bar{y}_b > \bar{y}_a$. Given the diminishing marginal utility of income, this implies

$$\frac{\partial U}{\partial(\bar{y}_b - p_a)} < \frac{\partial U}{\partial q_a}$$

Since there is a diminishing marginal utility of q_i also, person b maximizes utility at a level of $p_b = q_b > p_a$. Thus relatively poor people would choose relatively low levels of $p_i = q_i$, and the relatively rich would select a higher $p_i = q_i$.

If suppliers also serve subsidized, immobile clients and receive p_i for each one, then a wide range of q_i could be provided to the needy. If this variation is believed to be undesirable and if the service cannot be transferred across clients, then the variation in quality can be ended by subsidizing some mobile customers and taxing more wealthy clients. If a single agency controls subsidy funds for all charities, then "prices" net of subsidy or tax could be set so that everyone ends up demanding the same quality level. The funding agency announces that it will pay the manager of charity i :

$$\sum_{r=1}^t (1 - B_r) p_i n_i^r,$$

where n_i^r is the number of i 's customers with income \bar{y}_r , and the B_r have been set so that all mobile customers select the same quality level. The B_r are determined as follows, once the quality level, q_b , has been set: Find \bar{y}_b such that when people with \bar{y}_b maximize utility subject to $p_i = q_i$, they choose q_b . Set $B_b = 1$ for these people. Consider some $\bar{y}_c > \bar{y}_b$ where

$$\frac{\partial U}{\partial q_b} > \frac{\partial U}{\partial(\bar{y}_c - q_b)}.$$

Set $B_c > 1$ such that

$$\frac{\partial U}{\partial q_b} = B_c \cdot \frac{\partial U}{\partial(\bar{y}_c - B_c q_b)}$$

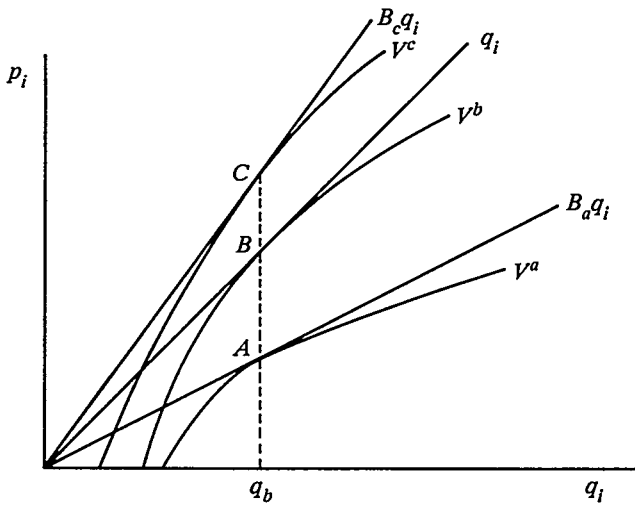


FIGURE A-3

Conversely, for $\bar{y}_a < \bar{y}_b$, B_a must be less than one (and greater than zero). Each supplier also receives p_b ($B_1 = 0$) for each immobile, needy client that it must serve. In order to maximize profits or revenues, given the behavior of competitors, each supplier charges mobile customers prices $B_r q_b$ that depend on their income and nets p_b per client. Thus, in Figure A-3, people with income $\bar{y}_c > \bar{y}_b$ pay $B_c q_b$ where $B_c > 1$. People with income $\bar{y}_a < \bar{y}_b$ pay $B_a q_b$ where $B_a < 1$. The prices have been set so everyone chooses q_b .

C. Vouchers

Now consider a situation in which the needy can judge quality as well as the unsubsidized. The subsidizing agency, however, believes that they should consume a higher quality than they would be willing to purchase with an untied cash grant. Given this condition we ask whether vouchers will be superior to proxy shopping. To take a simple case, suppose that the needy have the same utility functions as others but have lower incomes. Assume that there are only two income classes, needy and wealthy with \bar{y}_n and \bar{y}_w respectively so that $\bar{y}_n < \bar{y}_w$. First consider a voucher plan that reimburses all fees up to a fixed ceiling, K . Equilibrium conditions for the needy are:

$$U(q_i \bar{y}_n) = U(q_j \bar{y}_n) = U(q_m \bar{y}_n + K - p_m) \quad (3)$$

if the needy patronize i, j and m and if $p_i, p_j \leq K$ while $p_m > K$. And,

$$U(q_k \bar{y}_n + K - p_k) < U(q_i \bar{y}_n), \quad (4)$$

where i is the i^{th} charity in (3) and k serves no subsidized clients. Since those who serve subsidized clients will always charge at least K , the per capita subsidy cost is K .

This scheme is illustrated in Figure A-4 for the case in which the needy spend some of their own money on the service. A fixed subsidy can be represented by the line $q_i = p_i + K$ for $p_i \geq 0$. The minimum quality provided

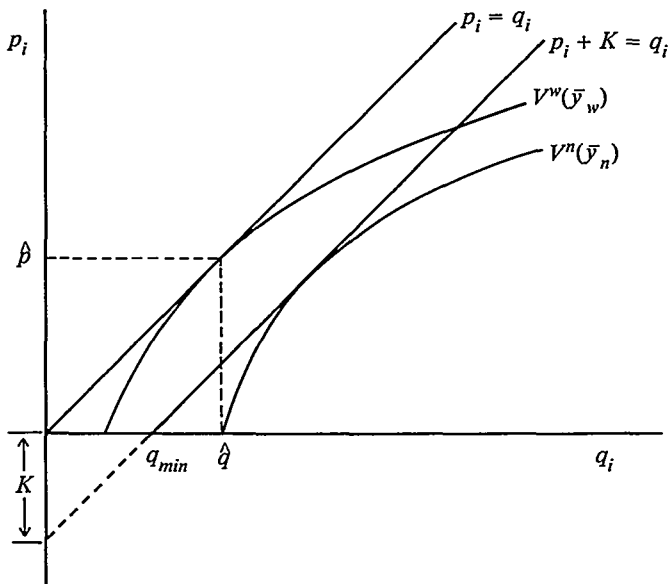


FIGURE A-4

is q_{min} . If the needy spend more than K on the service, a flat grant voucher is cheaper than proxy shopping. Before espousing such a plan, however, it is important to recognize that this result occurs because a fixed sum voucher is exactly like an income grant if the person consumes more than q_{min} . But, by hypothesis a cash grant is unacceptable to the funding agency. If, instead, the needy's demand for quality is so low that they would buy less than q_{min} if given an unconstrained cash grant of K , then the funding agency could increase K until q_{min} = the quality level chosen by paying customers. The needy would spend none of their own money on q and the program would cost just as much as proxy shopping. It would, however, have none of proxy shopping's quality-control benefits. Even if the needy are excellent judges of quality, they have little incentive to shop effectively if the total cost of the service is paid by outsiders. Therefore, a voucher plan of this kind is of no particular value as a quality-control scheme.

Now consider a second type of plan that has a marginal effect on the choices of all beneficiaries. Suppose that the value of the voucher is set equal to $(1 - \alpha)$ of the market price. Then, since $p_i = q_i$ in the uncontrolled market, equilibrium conditions for the needy are:

$$U(q_p \bar{y}_n - \alpha q_i) = U(q_j \bar{y}_n - \alpha q_j), \quad (5)$$

if the needy patronize both i and j while

$$U(q_k \bar{y}_n - \alpha q_k) < U(q_p \bar{y}_n - \alpha q_i) \quad (6)$$

for all k which serve no needy clients and all i which serve needy clients. Clearly, an increase in the subsidy rate will induce the needy to choose higher levels of quality. Such a program could be more expensive and yet give the

needy less income to spend on other goods than one in which the needy are forced to consume the same quality as the wealthy. Furthermore, it will only be fortuitous if suppliers end up serving both subsidized and unsubsidized clients. For client mixing to occur the rate α would have to be set so rich and poor both choose \hat{q} , i.e.:

$$\frac{\partial U_w}{\partial \hat{q}} = \frac{\partial U_w}{\partial (\bar{y}_w - \hat{q})} ; \quad \frac{\partial U_n}{\partial \hat{q}} = \frac{\partial U_n}{\partial (\bar{y} - \alpha \hat{q})}$$

A subsidy rate $(1 - \alpha)$ can be found that will fulfill this condition, but it is not obvious that it will also satisfy the funding agency's other subsidy goals. It is also not clearly superior for people who oppose paternalistic interventions because the subsidy rate has been set to produce a particular quality choice. Figure A-5 illustrates this situation. The wealthy choose quality level \hat{q} . When the price facing the poor is αq_i , they will also choose quality \hat{q} , but they are obviously worse off than under a system of proxy shopping where q is obtained for free. ($V_o^n < V_1^n$).

If, however, the needy are believed to be mobile and good judges of quality, then there is no reason to try to mix unsubsidized and subsidized customers. The main issue is the level of the subsidy. With vouchers, the utility level V_1 obtained by proxy shopping in Figure A-5 can only be achieved by a higher subsidy rate, $1 - \beta$. This implies a quality level above that chosen by the unsubsidized and costing the funding agency $(1 - \beta)q_\beta$. Clearly it is possible to have $(1 - \beta)q_\beta > \hat{p} = \hat{q}$ if the poor have relatively little interest in quality. In that case, the percentage subsidy would have to be very deep in order to induce them to purchase a quality level that makes them as well off as with proxy shopping. Thus for a given subsidy budget, the needy may be better off if their choices are limited.

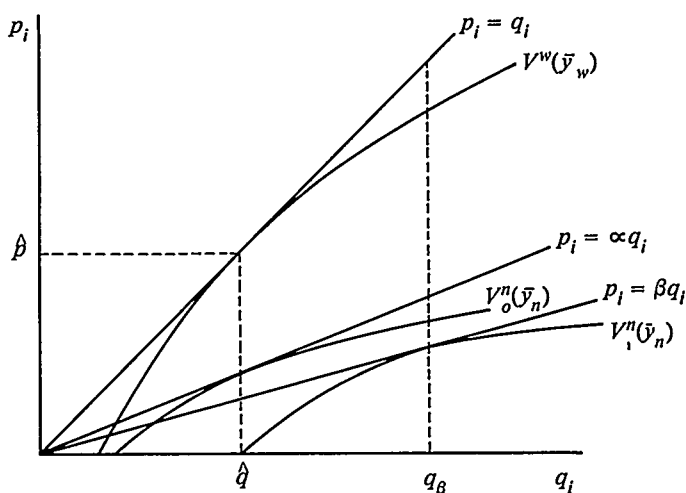


FIGURE A-5